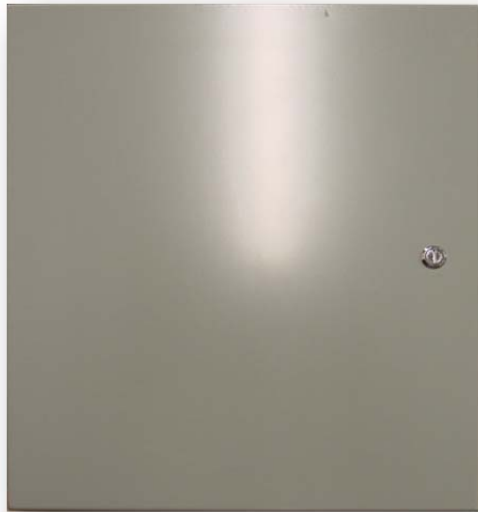


Caterpillar CCM to Modbus (CCMM)

Communications Conversion Panel



Product Benefits

The APT Caterpillar CCM to Modbus (CCMM) Communications panel integrates Caterpillar CCM and converts its output to RS-485 port with Modbus RTU or ASCII protocol. Modbus RTU protocol allows for easy integration into customers SCADA, DSC or other computerized monitoring systems.

Product Features

- Fully Integrated NEMA 1 Wall-Mounted Panel
- Standard Terminal Points for Field Connected 120VAC and 24VDC Power, CAT Data Link, and RS-485 Connections
- Jumper Selectable 2 Wire or 4 Wire RS-485 Connection
- 16 Additional 24VDC Inputs for Monitoring Additional Field Devices such as Fuel, Oil and Coolant Levels, Spill Switches, Circuit Breaker Positions, etc.
- 16 Additional 24VDC Digital Outputs for Controlling Louvers, Circuit Breakers, Start/Stop, etc.
- All 24VDC Inputs and Outputs are Readable and Writeable Via Modbus Port
- Custom Register Mapping is Available

Typical Parameters List

Analog Values	Alarms/Shutdowns	Electrical Values
Engine speed (RPM)	Overspeed	Voltage, Phase A-B
Coolant temperature	High coolant temperature	Voltage, Phase B-C
Atmospheric pressure	Low oil pressure	Voltage, Phase C-A
Filtered engine oil pressure	High aftercooler coolant temperature	Current, Phase A
Boost pressure	High crankcase pressure	Current, Phase B
Engine operating hours	No engine speed	Current, Phase C
Aftercooler temperature	Fuel injection disabled	Frequency
Battery voltage	Emergency stop shutdown	Active Energy
Oil filter differential pressure	High exhaust temperature	Reactive Energy
Fuel filter differential pressure	Air filter plugged	Active Power
Right exhaust temperature	Engine overspeed	Reactive Power
Left exhaust temperature	Low coolant temperature	Power Factor
Filtered fuel pressure	High coolant temperature	Power Factor Lead/Lag status
Right air filter restriction	Low oil pressure	
Left air filter restriction	Low battery voltage	Spare Digital Inputs
Fuel consumption rate	High aftercooler coolant temperature	Digital input 1
Total fuel the engine has burned	High crankcase pressure	Digital input 2
	Fuel filter plugged	Digital input 3
	Oil filter plugged	Digital input 4
	Diagnostic code shutdown	Digital input 5
	Emergency stop	Digital input 6
	Spare fault	Digital input 7
	High coolant temperature	Digital input 8
	Low oil pressure	Digital input 9
	Overcrank	Digital input 10
		Digital input 11
		Digital input 12
		Digital input 13
		Digital input 14
		Digital input 15
		Digital input 16